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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/478,136	01/05/00	HOUSE	D 1420-2

WM02/0411
MARGER JOHNSON & MCCOLLOM P C
1030 S W MORRISON STREET
PORTLAND OR 97205

EXAMINER	
HARVEY, D	
ART UNIT	PAPER NUMBER
2643	4

DATE MAILED: 04/11/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/478,136	House
Examiner	**Group Art Unit**
Dionne Harvey	2643

☒ Responsive to communication(s) filed on *Jan 5, 2000*

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) *1-18* is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-18* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *2*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admitted Prior Art (APA) in view of Puharich (US 3,586,791) OR Loeb (US 5,571,148).

Regarding claims 1 and 4, as shown in figure 2, the APA teaches a method for stimulating the human cochlea in response to a sound comprising; generating an electrical sound signal in response to sound(62); generating an analog carrier signal; modulating(60) the carrier signal to generate a modulated signal; and applying the modulated signal to an electrode(see figure 1) that is coupled with the cochlea. The APA fails to specifically teach that the carrier signal has a frequency greater than 20kHz.

Shown in Figure 1; column 2, lines 18-32, Puharich teaches a method for stimulating the "facial nerve system" comprising; generating an electrical sound signal is response to sound (17); generating a carrier signal; modulating the carrier signal to generate a modulated signal(15); and

applying the modulated signal to an electrode that is coupled to any facial nerve system of the user. Puharich further teaches that the carrier signal operates at a frequency of 6-60kHz, dependent upon the type of electrodes employed. Although Puharich fails to specifically teach a "cochlea" electrode, he teaches carrier signal transmission via the "facial nerve system" which consists of "...nerves located **in the head and neck regions of the subject**."(column 3, lines 30-51). Additionally, Loeb teaches an implantable cochlea stimulator with a carrier frequency between 100-5000 KHZ (see column 11, lines 9-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of the APA and Puharich or Loeb, thereby providing a carrier signal having a frequency greater than 20Khz, so as establish the desired resonant coupling by matching the carrier frequency to the capacitance of the intended tissue at which the coupling electrodes are to be placed(SEE Puharich; column 2, lines 19-32) or because a higher frequency can be produced using a smaller sized crystal within the oscillator circuit (SEE Loeb; column 12, lines 0-15).

Similarly, Regarding claims 7,10,13 and 16, the APA teaches a driver and cochlear implant system for a patients cochlea comprising; a microphone(62); at least one electrode(34) for coupling to the patients cochlea(30); an internal coil(40) for implanting in the patient; a microphone(62); a modulator(60); an external coil(56); and an oscillator(57). The APA fails to teach that the carrier signal has a frequency greater than 20kHz.

Shown in Figure 1; column 2, lines 18-32, Puharich teaches a method for stimulating the "facial nerve system" comprising; generating an electrical sound signal is response to sound (17);

generating a carrier signal; modulating the carrier signal to generate a modulated signal(15); and applying the modulated signal to an electrode that is coupled to any facial nerve system of the user. Puharich further teaches that the carrier signal operates at a frequency of 6-60kHz, dependent upon the type of electrodes employed. Although Puharich fails to specifically teach a "cochlea" electrode, he teaches carrier signal transmission via the "facial nerve system" which consists of "...nerves located in the head and neck regions of the subject."(column 3, lines 30-51).

Additionally, Loeb teaches an implantable cochlea stimulator with a carrier frequency between 100-5000 KHZ (see column 11, lines 9-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of the APA and Puharich or Loeb, thereby providing a carrier signal having a frequency greater than 20Khz, so as establish the desired resonant coupling by matching the carrier frequency to the capacitance of the intended tissue at which the coupling electrodes are to be placed(SEE Puharich; column 2, lines 19-32) or because a higher frequency can be produced using a smaller sized crystal within the oscillator circuit (SEE Loeb; column 12, lines 0-15).

Regarding claims 2,5,8,11,14 and 17, as disclosed on page 2, lines 5-6, both the APA and Loeb teach modulating by amplitude modulation (see column 4, lines 40-45 & column 11, lines 13-16, respectively).

Regarding claims 3,6,9,12,15 and 18, Loeb teaches modulating by frequency modulation (see column 11, lines 13-16).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Harvey whose telephone number is (703) 305-1111. The examiner can normally be reaches on Monday through Friday from 8:30am to 6:00pm.

Any responses to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

or faxed to:

(703) 308-6306, for formal communications for entry

Or:

(703) 308-6296, for informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor(Receptionist)

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached at (703) 305-4708.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Harvey whose telephone number is (703) 305-1111.

D.H.

SINH TRAN
PRIMARY EXAMINER